a slight residual deformity and asymmetry, which was scarcely noticeable with the patient's face in repose. After this attack he was found to have infected teeth, and these were removed.

On examination no abnormal findings were found in his chest, heart, or abdomen. He had the physical signs of a complete left facial palsy, including loss of taste in the anterior two-thirds of the left side of the tongue. There was no movement in any of the left facial muscles. No other abnormal neurological signs were found, and no evidence of any throat or ear lesion. The latter was confirmed by an E.N.T. consultant. All further examination was negative and there was no evidence of a focus of infection anywhere. Recovery began 10 days after his first attendance, and after a month he could close his eye, and all other movements had partially returned. He was treated by a fortnight's course of galvanism and then by self-massage and exercises. He had a splint provided for the corner of his mouth, and this he wore at night. When it was seen that recovery was proceeding rapidly no further physiotherapy was given and he returned to work. After two months recovery was almost complete, and when seen some time later there was no weakness at all on the left side, but the permanent slight changes on the right were noted.

COMMENT

It is interesting to note that three of this patient's attacks occurred in January, though no seasonal incidence has been noted in Bell's palsy. All the four episodes were similar, including the impairment of taste in all the attacks. These attacks ran very much the same course, and it is of interest to note that physiotherapy in the form of galvanism made little, if any, difference to the time taken for recovery. In fact, the only attack which left any residual deformity was one of the two for which he had physiotherapy. It is, in any case, doubtful whether electrical stimulation is of value in facial palsy. Indeed, Walshe (1947) states that in no case can it be said that electrical stimulation of the paralysed muscles by galvanism serves any useful purpose.

My thanks are due to Dr. W. H. St. John Brooks for permission to publish this case.

GWYN HOWELLS, M.D., M.R.C.P.

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Extreme Anaemia with Recovery, Associated with Pigmentary Changes in the Hair

This case shows that a haemoglobin level of 0.7 g.% (5% Sahli) is compatible with life and moderate activity.

CASE REPORT

An aboriginal Malay boy aged about 10 years was found in his forest clearing to be suffering from breathlessness on exertion, slight cough, dizziness, retrosternal pain, and occasional fever, which had all developed over several years.

Examination revealed the following abnormal physical findings: breathlessness on walking, but comfortable at rest; very pale puffy face; slight oedema of ankles; white smooth tongue and angular stomatitis; hair dry, lustreless, and rough, with a well-marked brown colour not normally found in his tribe; apex beat in the sixth intercostal space, mid-axillary line; harsh systolic murmur particularly at the base; blood pressure 90/40; pulse 120; liver palpable three fingerbreadths below the costal margin.

Laboratory investigations on the day of admission showed: Marrow, normoblastic; white blood cells, 7,600 (polymorphs 67%, lymphocytes 31%, eosinophils 1%, normoblasts 1%); serum iron, 85 g.%. Stools contained ova of *Ancylostoma duodenale*, *Ascaris lumbricoides*, and *Trichuris trichiura*, and 4.3% fat. Occult blood, positive. Blood film for malaria, negative. Blood Kahn test, negative. Serum bilirubin, 0.4%; alkaline phosphatase, 11 King–Armstrong units. Thymol turbidity, 1.5 units.

Treatment.—On admission 50 mg. of saccharated iron oxide was given intravenously, the amount then being increased to 100 mg. daily up to the ninth day; total dosage, 950 mg. On the 20th day the patient received tab. ferri. sulph., 2 gr. (0.13 g.) three times daily after meals. On the 36th and 43rd days he was dewormed, 2 ml. of tetrachlorethylene being given on each occasion.

Table of Progress Findings

Day	Hb (g.%)	Erythrocytes (10^6 per c.mm.)	P.C.V. (%)	M.C.V. (cubic μ)	M.C.H.C. (%)	Reticulocytes (%)	Total Hb (g.)	Plasma Proteins (g.%)	Plasma Albumin (g.%)	Plasma Globulin (g.%)
0	0·7	1·00	7·0	70	10	0	64	5·07	2·93	1·89
3	2·1	1·13	9·0	80	23	33				
6	3·0					11				
9	3·6	1·48	19·0	128	19	9				
14	6·1	2·73	26·5	96	23	6				
22	6·6	2·76	32·0	115	21	1		7·22	3·91	3·06
29	8·9	3·41	35·5	104	25	1				
36	10·0	3·52	38·0	108	26	0				
43	11·9	4·16	38·0	91	31	0	367	6·84	3·32	3·27

All blood samples were removed by venepuncture.

He improved rapidly with treatment; all symptoms and signs receded except that the hair remained unchanged and the liver was still palpable at one fingerbreadth.

COMMENT

In the past few months one of us has seen several patients with very low haemoglobin values (1.6, 1.95, and eight with 2.0–2.5 g.%), but we have not seen or heard of a value as low as 0.7 g.%.

Haemoglobin values were estimated by the cyanmethaemoglobin method, two tubes being used; and, while at this low range the degree of accuracy is not as good as at higher levels, the value for this boy was undoubtedly below 1 g.%, and a finger could be seen through the column of oxalated blood in a test-tube. The rapid rise of haemoglobin and packed cell volume and the high reticulocytosis indicated full response to the intravenous iron. It will be noted that the presence of the hookworms during treatment with iron did not hinder blood regeneration, nor was there a secondary reticulocytosis following the vermifuge.

The hair dyspigmentation is interesting in view of a similar condition found in kwashiorkor. Brown hair in the black-haired peoples of Malaya is fairly common among the malnourished, especially children, and in those exposed to sea-water and sun. The cause of this pigmentary change has not been discovered. In this boy it is unlikely to be due to a general protein deficiency, as the plasma protein values were not grossly abnormal and neither did they fall with the rapid blood regeneration as might occur in a protein-deficient patient. Browning of the hair has not been reported in hookworm infestation in which the possibility of dietary disease has been excluded.

Severe iron-deficiency anaemias in Malaya differ from those in the United Kingdom in that koilonychia is extremely rare, nor is the Plummer–Vinson syndrome ever seen; but angular stomatitis which heals with iron therapy alone is common in the severely anaemic.

We thank the medical superintendent and staff of the General Hospital, Kuala Lumpur, for their help in treating this patient.

PETER TASKER, M.B., B.S.,
Institute for Medical Research, Kuala Lumpur.

IVAN POLUNIN, D.M., B.Sc.,
Department of Social Medicine and Public Health, University of Malaya.